In the Supreme Court of the United States

OCTOBER TERM, 1978

No. 78-1036

RAY MARSHALL, SECRETARY OF LABOR, PETITIONER

v.

AMERICAN PETROLEUM INSTITUTE, ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

REPLY MEMORANDUM FOR PETITIONER

Respondents have argued that, for several reasons, the record of this case does not present the legal questions raised by our petition. We do not discuss this contention with respect to the portions of the regulations dealing with airborne benzene; these points are fully addressed in our petition and the reply brief of the Industrial Union Department, petitioner in No. 78-911. We discuss below the contentions of respondents Rubber Manufacturers Association, *et al.*, concerning the dermal exposure rules. For the reasons we discuss, their interpretation of the record is both erroneous and misleading.

1. Respondents contend that the dermal contact rules cannot be enforced because they were not given adequate notice that the standard would prohibit skin contact with liquids containing more than 0.1% benzene (Rubber Mem. in Opp. 26-30). If they had been given better notice, they say, they would have performed a skin absorption test and supplied the results to the Secretary.

The notice argument presupposes that respondents did not know, until the initiation of the rulemaking, that dermal exposure to benzene would be a subject of regulation. But the statute itself put industry on notice that toxic substances are subject to regulation, and it was common knowledge that benzene is toxic. The central question for industry, then, was not whether the Secretary would begin to investigate exposure to benzene, but how soon he would do so (given the substantial numbers of other toxic substances subject to regulation). Industry could have begun the process of research as soon as the statute was enacted; it did not need to wait until the initial notice of rulemaking. And questions concerning the extent of absorption of benzene into the body through exposed surfaces were obvious candidates for research.

But however this may be, the notice given by the Secretary was more than adequate. The Secretary's initial notice on May 27, 1977, of the proposed standard put respondents on notice that, in and after the second year of regulation, the standard would prohibit dermal and eye contact with liquids containing more than 0.1% benzene; the notice invited comment and evidence on whether exposure to liquids containing *any* benzene should be allowed.[1] The final standard, as amended, is almost

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[1]The original announcement included both a proposed standard and an explanatory statement. The proposed standard stated that "[w]here eye or repeated skin contact with liquid benzene may occur, the employer shall provide and assure that employees wear appropriate protective clothing and equipment to protect the area of the body likely to come in contact with liquid benzene." Section 1910.1028(h), 42 Fed. Reg. 27461 (1977). The proposed standard stated that it did not apply to "work operations where the only exposure to benzene is from liquid mixtures containing 1% (0.1% after one year from the effective date of this standard) or less of benzene by volume, or the vapors released from these liquids." Section 1910.1028(a)(2)(ii), 42 Fed. Reg. 27460 (1977).

The explanatory statement identified 12 issues for discussion at the hearings, including whether the provisions for "personal protective equipment and clothing * * * are appropriate." 42 Fed. Reg. 27452

identical to the originally proposed standard.[2]

Respondents had ample time after May 27 to conduct a study such as Dr. Maibach's. Hearings were held from July 19 through August 10, 1977 (App. 74a). The hearing record was open until September 2, 1977, for the submission of additional evidence. Respondents submitted evidence on the dermal-eye contact issue and percentage exclusion (Rubber Mem. in Opp. 10). Although respondents stated (Rubber Mem. in Opp. 11) that Dr. Maibach's tests could have been performed in six to twelve weeks, respondents did not make any effort to

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(1977). Regarding the question whether the Secretary should allow contact with liquid benzene, the announcement stated (*ibid.*):

> One of the major issues involved in this proceeding is whether the final standard should exempt certain specified operations from its coverage. For the purpose of raising this issue, the proposal, as drafted, does not cover * * * operations in which the only exposure to benzene is from liquid mixtures which contain no more than 0.1% benzene (1% benzene during the first year after the effective date of the standard). The question of whether these types of operations should be exempted is raised herein, and some of the reasons for the suggested exclusion of those operations are set out below. If these operations are excluded from the final standard issued as a result of this rulemaking, they would still be covered by the existing benzene standard in §1910.1000. OSHA seeks public comment and evidence on these issues.

Moreover, the announcement on May 3, 1977, of the Secretary's temporary standard explained that the proceedings on the permanent standard would consider whether any exclusions from a dermal contact ban should be allowed. 42 Fed. Reg. 27470.

[2]The proposal contained an exemption for liquids containing 1% or less benzene during the first year of the standard and 0.1% thereafter. Section 1910.1028(a)(2)(ii), 42 Fed. Reg. 27460 (1977). The original standard—which contained no percentage exclusion—was published on February 10, 1978. In response to claims by industry that the standard was not technologically feasible without a percentage exclusion, the Secretary announced on March 28, 1978, proposed rulemaking to amend the standard to exclude liquids containing 0.1% or less of benzene. 43 Fed. Reg. 12890. The final amended standard exempted liquids with 0.5% or less benzene during the first three years and 0.1% thereafter. Section 1910.1028(a)(2)(iii); App. 252a.

supply such test results during the original proceedings. Other than to claim inadequate notice, respondents offer no excuse for their failure to make such a submission.[3]

2. Respondents contend that "OSHA refused to consider such evidence [whether small amounts of benzene constitute a health hazard] even after the rubber companies expressly warranted to the Agency that Dr. Maibach was conducting a study of issues relating to dermal exposure to benzene" (Rubber Mem. in Opp. 16). This is inaccurate. The hearing during which the Secretary so "refused" was the supplemental hearing to address the question whether the Secretary should allow dermal contact with liquids containing small amounts of benzene (the percentage exclusion issue). By the time this hearing was held the Secretary had concluded that skin or eye contact with benzene is hazardous. He was not required to reopen this determination. At all events, he was not required to grant respondents' request for six months' delay at that stage. Respondents by then had had much more than the 12 weeks they said was needed for a study, but no study had been supplied. Moreover, the agency did not tell respondents that Dr. Maibach's study would not be considered. To the contrary, Grover Wrenn stated, on behalf of the agency, that such a study would be considered. He simply said that the agency would not delay the standard for 26 weeks, as requested, while Dr. Maibach conducted a study (Amend. Tr. 21).[4]

3. Respondents err in contending (Rubber Mem. in Opp. 11 n.18) that only one reference in the administrative record suggests that benzene could be absorbed through the skin. First, Dr. Laigo of the

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[3]Contrary to respondents' assertion (Rubber Mem. in Opp. 28), the court of appeals did not "take cognizance" of any lack of proper notice. The court did not pass on the argument.

[4]"Amend. Tr." refers to the transcript of the proceedings on the amendment to the standard.

National Institute of Occupational Safety and Health testified that benzene "is readily absorbed through the skin" (Tr. 860). Second, the American Conference on Industrial Government Hygienists, and its German counterpart, recommended that dermal contact with liquids containing benzene be avoided because of the potential for absorption through the skin (Exhs. 2-58; 156.2).[5] Third, the fact that benzene is a powerful lipid solvent suggests that it can penetrate the cutaneous barrier (Exh. 2-A-187). Fourth, benzene can damage the skin, and damaged skin is believed to absorb toxic substances more readily than normal skin (Exhs. 2-3 at 25; 2-48; 2-A-111 at 9; 2-A-112 at 2; 2-A-187 at 6.11). Fifth, one study of the Institute of Industrial Toxicology of the Institute of Labor Health, Lodz, Poland, concluded that benzene is absorbed through human skin (Exh. 2-69 at 1), and other studies showed skin absorption in animals (Exh. 2-31 and 2-69).[6] Sixth, Dr. Douglas Smith testified that benzene can be absorbed through the skin (Tr. 860; Rubber Mem. in Opp. 11 n.18). The court of appeals thus properly concluded that the Secretary's finding that benzene is absorbed through the skin is supported by substantial evidence (Pet. App. 25a).

4. Dr. Maibach's preliminary report—supplied for the first time as an appendix to respondents' opposition—actually supports the Secretary's action in two ways.

First, the court of appeals based its holding on the assumption that a short and simple experiment might determine conclusively that benzene is not absorbed through the skin (Pet. App. 22a-27a). Dr. Maibach's

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[5]See 43 Fed. Reg. 5949 (1978).

[6]Because of possible methodological defects in these studies, they were not considered conclusive in themselves. They were, however, viewed as corroborating the experts' opinions that benzene is absorbed.

preliminary study confirms the Secretary's conclusion that benzene is absorbed through the skin.[7]

Second, the attempt to perform a radioactive benzene test illustrates the pitfalls in setting aside a standard based

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imposed by the court of appeals. In light of the fact, however, that skin absorption poses a cancer hazard and the fact that there is no known safe level of absorption, Section 655(b)(5) requires the Secretary, in adopting a rule regarding eye and skin contact, to adopt a standard that most fully protects health, subject only to feasibility.

As to the rate of absorption, the Maibach study is subject to serious question. The study was conducted in a manner that underestimates the absorption rate. First, the subjects were exposed to only a single dose of benzene (Rubber Mem. in Opp. App. 7a), whereas in real life some employees are exposed repeatedly to liquids containing benzene. Dr. Maibach testified in 1977 that the number of doses might well make an important difference (Tr. 2467). Second, much of the dose applied in the Maibach study would have evaporated from the skin, thus reducing the amount of benzene available for penetration. Dr. Maibach testified in 1977 that benzene is very volatile and evaporates rapidly (Tr. 2468). The Maibach subjects were kept outdoors, which would have accelerated evaporation. Third, in the Maibach study liquid benzene was applied to the forearm of a rhesus monkey; the forearms of rhesus monkeys and humans may not be comparable for absorption purposes. Fourth, the rate of absorption through the human skin varies greatly with the part of the body, as Dr. Maibach testified (Tr. 2466, 2480). Studies on absorption through the forearm thus may not indicate the usual rate of absorption. Fifth, the rate of absorption normally increases with the temperature (Tr. 2479). The study does not state the temperature at which the subjects were maintained during the study. Sixth, the Maibach study, which relies on a single application of benzene to the test subjects, does not take into account the fact that repeated contact with benzene can blister the skin and reduce its ability to prevent penetration. In 1977 Dr. Maibach testified that penetration normally is greater through damaged skin than undamaged skin (Tr. 2469). The Maibach study itself admits several of these limitations (Rubber Mem. in Opp. App. 11a).

[7]In light of this, respondents now argue that the rate of absorption is so small that the health benefits of the dermal-eye contact prohibition do not satisfy the separate cost-benefit requirement imposed by the court of appeals. In light of the fact, however, that skin absorption poses a cancer hazard and the fact that there is no known safe level of absorption, 29 U.S.C. 655(b)(5) requires the Secretary, in adopting a rule regarding eye and skin contact, to adopt a standard that most fully protects health, subject only to feasibility.

on speculation that evidence can be created readily. Dr. Maibach testified in the Secretary's hearing not only that his carbon-14 test would determine whether benzene is absorbed through the skin but also that those tests would determine a number of other related issues. The court of appeals was plainly influenced by the prospect that "conclusive" answers to many questions were "readily" available in a short time through a simple study (Pet. App. 26a). The time proved to be not-so-short. Dr. Maibach's "preliminary" results were received by the Secretary one-and-a-half years after Dr. Maibach testified that his study could be completed in six to twelve weeks. The results proved to be not-so-conclusive (see note 7, *supra*). And Dr. Maibach's study did not address any issue except to confirm the Secretary's conclusion that benzene is absorbed through the skin and to suggest that the rate of absorption depends on the amount applied. Dr. Maibach now proposes (Rubber Mem. in Opp. App. 10a) further experiments, and, we assume, further delays to tackle some of the additional issues that the court of appeals thought would be resolved by Dr. Maibach's initial effort (see Pet. App. 26a).

This sequence of events illustrates our point that industry often will be able to point to toxicological research that allegedly will provide conclusive answers to medical uncertainties. It also illustrates the mischief that can be caused when health standards are postponed in hope that "one more study" will resolve all doubt. These considerations underscore Congress' wisdom in requiring the Secretary to consider only "available" evidence in discharging his responsibility to protect the health of employees.[8]

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[8]Of course, if, after the Secretary has promulgated a standard, new evidence comes to light casting doubt on the wisdom of that standard, any interested person may ask the Secretary to make

For these reasons, as well as those discussed in our petition, we respectfully submit that the Court should grant review.

WADE H. MCCREE, JR.
Solicitor General

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appropriate revisions in the standard. Our point here is simply that the prospect of additional evidence becoming available does not require the Secretary to defer promulgating the standard in the first place.

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